

REGION: 00
STATE: CA

U.S. ENVIRONMENTAL
OFFICE OF EMERGENCY A
C E R C I J

M.2 - SITE MAP

SFUND RECORDS CTR
2057911

EPA ID : CAT000614040

SITE NAME: SIGNETICS

SOURCE: 1

STREET : 3625 PETERSON WAY

CONG DIST: 1

CITY : SANTA CLARA

ZIP: 95051 *

CNTY NAME: SANTA CLARA

CNTY CODE : 08

LATITUDE : 37/21/12.0

LONGITUDE : 121/57/30.0

LL-SOURCE: G

LL-ACCURACY:

SMSA : 7400

HYDRO UNIT: 18050007

INVENTORY IND: Y REMEDIAL IND: Y REMOVAL IND: N FED FAC IND: 1

NPL IND: 1 NPL LISTING DATE: NPL DELISTING DATE:

SITE/SPILL IDS:

RPM NAME:

RPM PHONE: - -

SITE CLASSIFICATION:

SITE APPROACH:

DIOXIN TIER:

REG FLD1:

REG FLD2: 1

RESP TERM: PENDING ()

NO FURTHER ACTION ()

ENF DISP: NO VIABLE RESP PARTY ()
ENFORCED RESPONSE ()

VOLUNTARY RESPONSE ()
COST RECOVERY ()

SITE DESCRIPTION:

PA Complete
(N) = NPA pal
9.17.87.



RECOMMENDATIONS FOR FURTHER ACTION

DATE: July 30, 1987

PREPARED BY: Rick Dreessen, ICF Technology, Inc.

SITE: Signetics Corporation
3625 Peterson Way
Santa Clara, CA 95051
Santa Clara County

TDD #: F9-8706-66

EPA ID #: CAT000614040

1. Initial FIT Conclusions and Recommendations for Further Action:

a) Site Description:

The Signetics Corporation (Signetics) site is located at 3625 Peterson Way, Santa Clara, California (Figure 1, Site Location Map). Signetics is a subsidiary of U.S. Philips Corporation and has several locations within the Santa Clara - Sunnyvale area. The facility at 3625 Peterson Way performed electroplating operations for the manufacture of printed circuitry (2). Available file information does not indicate when Signetics commenced operations at this site or the facility size.

In August 1980, Signetics filed a Notification of Hazardous Waste Activity (EPA Form 8700-12) as a generator of hazardous waste under the Resource Conservation and Recovery Act (RCRA). Signetics described their hazardous wastes as waste water treatment sludges and spent plating solutions from electroplating operations, sludges from the bottom of plating baths, and spent stripping and cleaning bath solutions (2).

In April 1983, Signetics sold this facility to Advanced Micro Devices (AMD), another manufacturer of printed circuitry. In January 1986, AMD filed a RCRA Notification of Hazardous Waste Activity stating that their hazardous wastes consisted of spent halogenated solvents and the still bottoms from the recovery of these solvents (8). RCRA notifications were not filed for 1984 or 1985 and available documentation does not indicate whether AMD was active during this period. Available file information and conversations with state regulatory agency personnel indicate this facility is inactive at the present time.

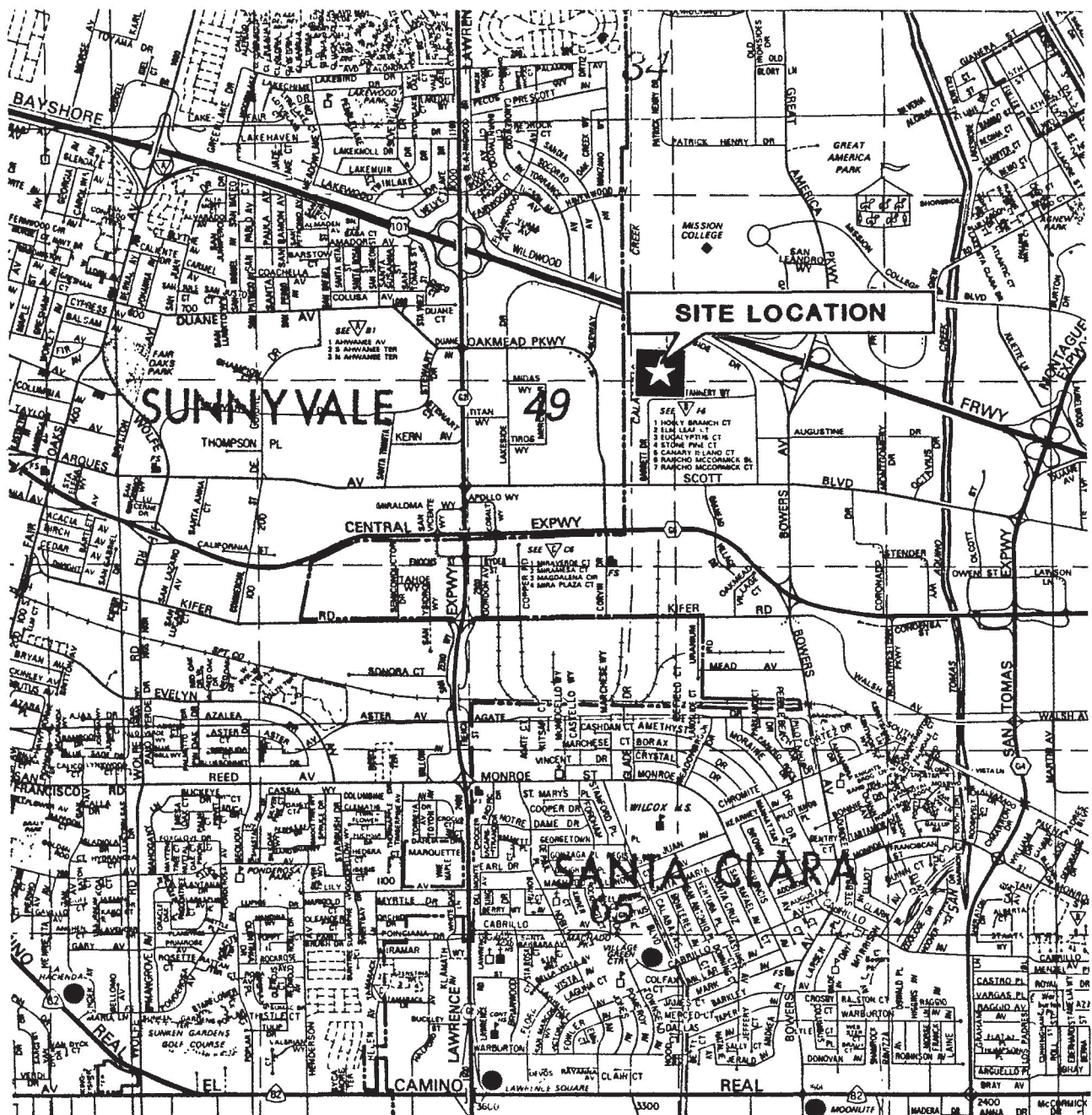


Figure 1 Site Location Map

Signetics Corporation
3625 Peterson Way
Santa Clara, California 95051

Source: The Thomas Guide, Santa Clara and San Mateo
Counties Street Guide and Directory, 1987



Scale: 1" = 2,200'



The area surrounding the site is used for light industrial, commercial, and residential purposes. The California Regional Water Quality Control Board (RWQCB) originally identified this site to the EPA as a potential hazardous waste site in March, 1986 (1). During 1983 to 1985 the RWQCB identified over 100 incidents of hazardous material leakage from underground tanks, sumps, and pipes. The largest number of incidents occurred in the electronics related industry located within Santa Clara County. Because of the "nature" of many of the chemicals and the locations of the leaks within a ground-water basin used as a major public water supply, the RWQCB required detailed investigations of all sites. The Signetics site at 3625 Peterson Way was part of this RWQCB study (22).

Apparent Problem:

The site was used from 1980 until 1983 for electroplating operations in connection with the manufacture of printed circuitry. Potentially hazardous commercial chemical substances handled on-site were acids, cyanides, phosphine, and volatile organic compounds. All chemical wastes generated were shipped approximately one mile to a Signetics facility at 811 Argues Avenue, Sunnyvale for further shipment to the Class I Kettleman Hills disposal site owned by Chemical Waste Management. The contract hauler was IT Corporation, San Jose, CA (7).

AMD purchased the property in 1983. In 1986, AMD filed a Notification of Hazardous Waste Activity identifying themselves as handling acetone, hydrofluoric acid, and methanol. Although AMD is a manufacturer of printed circuitry available documentation does not indicate the exact manufacturing processes involved at this specific site.

Ground-water analyses, performed in 1982, indicated the shallow aquifer was contaminated with trichlorofluoromethane (Freon 113) and trichloroethylene (see Ground-water Section). Sampling efforts have not been extensive enough to determine if the contamination is attributable to on-site practices of Signetics or to off-site contaminant migration.

b. HRS Factors:

Observed Release

Emcon Associates, San Jose, under contract to Signetics, performed limited shallow aquifer ground-water sampling in May 1982. Analyses of two monitor wells indicated the shallow aquifer was contaminated by trichlorofluoromethane (Freon 113) up to 4 ppb (Figure 2, well no. S45A) and trichloroethylene up to 3 ppb (Figure 2, well no. S44B). The California Department of Health Services (DOHS) has not developed the Maximum Contaminant Limit (MCL) in drinking water for Freon 113 but has issued a recommended MCL for trichloroethylene of 0 ppb (16).

RWQCB reports that analyses of shallow aquifer ground-water sampling of Magnetic Peripherals, Inc. (MPI) on Tannery Way (200 feet south of Signetics) indicate a Freon 113 ground-water contamination plume of up to 2000 ppb extending outward from that site (9). Maximum extent and direction of migration of this plume is currently being addressed by MPI.

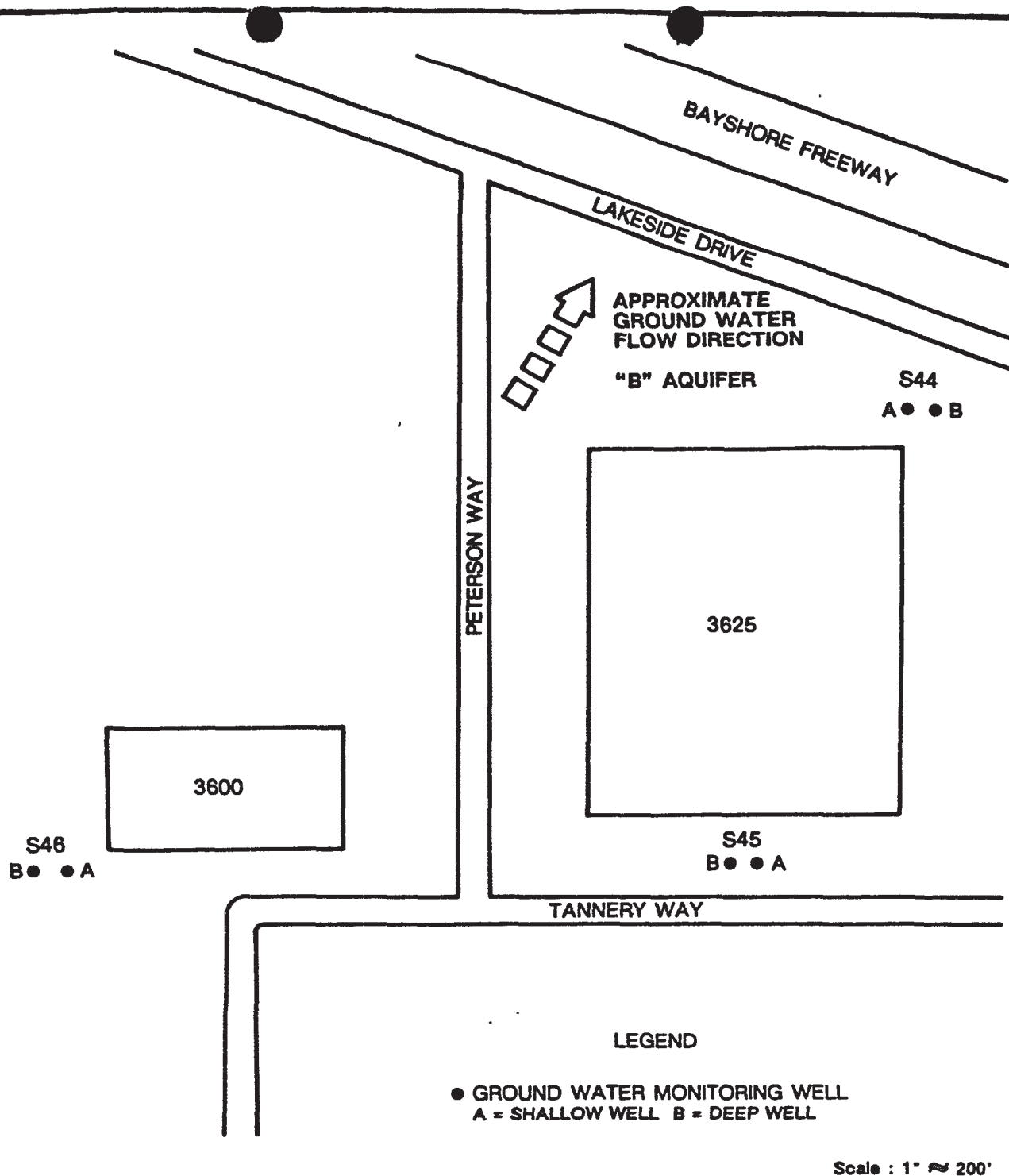


Figure 2 Peterson Way Monitoring Wells

Signetics Corporation
 3600 - 3625 Peterson Way
 Santa Clara, California 95051

Source: Misc. Memo from Emcon Associates to California Department
 of Health Services, June 1982



Current sampling has not determined whether the contamination of ground water at the Signetics site is attributable to on-site practices or to off-site contaminant migration onto the facility.

Direct Contact/Fire and Explosion:

Available documentation does not indicate the potential for direct exposure of contaminants to the general public. RCRA Notification of Hazardous Waste Activity lists the generated waste at this facility as ignitable, corrosive, reactive, and toxic (2, 8).

Waste Type/Quantity:

Signetics, in August 1980, and AMD in January 1986, filed EPA Form 8700-12, Notification of Hazardous Waste Activity, listing each chemical substance handled at the facility which may be a hazardous waste (TABLE I).

TABLE I

<u>Hazardous Waste</u>	<u>Toxicity Rating (10)</u>	<u>Hazardous Waste</u>	<u>Toxicity Rating (10)</u>
Arsenic Acid (S)	3	Tetrachloroethylene (A) (PCE)	3
Arsenic Trioxide (S)	3	Methylene Chloride (A)	--
Hydrocyanic Acid (S)	3	Trichloroethylene (A) (TCE)	3
Phosphine (S)	3-2	Chlorobenzene (A)	--
Potassium Cyanide (S)	3	1,1,2-Trichloro-1,2,2-Trifluoro- ethane (A)	--
Silver Cyanide (S)	3	O-dichlorobenzene (A)	2
Acetone (S,A)	2-1	Trichlorofluoromethane (A) (Freon 113)	2-1
Calcium Chromate (S)	3	Toluene (S)	3
Hydrofluoric Acid (S,A)	3-2-1	Xylene (S)	2
1,1,1-Trichloroethane (S,A) (TCA)	2-1		

(S) = Signetics

(A) = AMD

-- = Not Given

Available documentation does not include records pertaining to the quantities of potentially hazardous substances handled on-site. Signetics reported all chemical wastes handled or generated on-site were shipped to their facility at 811 Arques Avenue for further shipment to the Kettleman Hills disposal site (6).

Ground Water:

A large part of the Santa Clara Valley ground-water basin is characterized by upper and lower aquifer zones separated by a dense blue clay. Ground-water flow is to the northeast (Figure 2). The upper and lower aquifer zones are hydraulically

connected via wells that are perforated within both aquifer zones (15). These composite wells are located throughout the Santa Clara Valley. Heavy pumping of the lower aquifer for municipal water needs during periods of drought causes the composite wells to conduct contaminants from the upper aquifer into the lower aquifer (14, 15).

Municipal wells throughout the Santa Clara Valley were sampled for volatile organic compounds in late 1984 as required under Assembly Bill 1803. As a result of this sampling, levels of Freon 113 (2.0 ppb) were identified in City of Santa Clara water well no. 24, located approximately 2.75 miles south of the Signetics site.

Santa Clara Valley Water District ground-water wells supply water to the cities of Santa Clara and Sunnyvale. Total population served by ground-water wells is approximately 225,000 people. Santa Clara has a 27-well integrated system with 11 of these wells within three miles of the Signetics site. Twenty percent of the drinking water supply is imported from the Hetch-Hetchy Project (18). The closest Santa Clara well to the site is #20-02, approximately one mile west. Production perforations for this well range from 257 to 639 feet with a pumping capacity of approximately 1,000 gallons per day (18).

Wells supply 26 percent of the drinking water for Sunnyvale. Forty-eight percent is supplied from the Hetch-Hetchy Project and 26 percent from the Santa Clara Valley Irrigation District. Wells are in a fully integrated supply system with 30,000 metered service connections. The wells are perforated from 250 to 700 feet (19). The nearest Sunnyvale well is approximately 1.75 miles southwest of the Signetics facility.

Neither the City of Santa Clara nor Sunnyvale presently have municipal water supplies available from alternate sources. Net precipitation (November through April) is 7.1 inches (20).

Surface Water:

Three surface water bodies are located within three miles of the Signetics site, Calabazas Creek (500 ft. west), Tomas Aquino Creek (4800 ft. east), and the Guadalupe River (2.3 miles northeast). Beneficial uses of these surface waters are recreation, fish migration and habitat, wildlife habitat, industrial water supply, esthetic enjoyment, and navigation. According to the Santa Clara Valley Water District these surface water bodies are not used for human drinking water purposes (12). The one year 24 hour rainfall value for the Santa Clara area is approximately 3 inches (13).

The following federally endangered species and candidate species may be found as far south as the limit of tidal influence in south bay creeks and sloughs (1.5 miles from Signetics):

Endangered Fauna

California Clapper Rail
Salt Marsh Harvest Mouse
Peregrine Falcon
Brown Pelican
Least Tern

Endangered Flora

None

Candidate Fauna

Salt Marsh Yellow Throat
California Black Rail
California Song Sparrow

Candidate Flora

Point Reyes Birdsbeak
Hairless Popcorn Flower
Delta Tulip Pea

Other Factors:

Preliminary HRS evaluation indicates that the surface water and air route scores will not be great enough for inclusion of this site on the National Priorities List. However, preliminary HRS evaluation does indicate the ground-water route score will be greater than 28.5 if there is a documented observed release directly attributable to this site.

Other Agency Involvement:

Between 1980 and 1983 DOHS received annual Hazardous Waste Generator Reports from Signetics concerning this site. DOHS presently classifies this site as inactive (21).

All of the Signetics sites located in the Santa Clara Valley were identified as potential hazardous waste sites in March, 1986, by the California Regional Water Quality Control Board (RWQCB). The Signetics site at 3625 Peterson Way was classified by RWQCB in 1985 as requiring no further action other than semi-annual monitoring. According to RWQCB personnel this site is currently classified as inactive (9).

c. Conclusions and Recommendations:

The Signetics site located at 3625 Peterson Way, Santa Clara, was used from 1980 to 1983 for electroplating operations in connection with the manufacture of printed circuitry. In 1983, Signetics sold the facility to AMD, also a manufacturer of printed circuitry. Available file information does not indicate the exact manufacturing processes employed by AMD from 1983 to closure of the facility. Available documentation does not indicate the exact date of closure.

Potentially hazardous materials used by Signetics and AMD on-site were acids, cyanides, acetone, and other volatile organic compounds. Analyses of the shallow aquifer ground water on-site indicate low level contamination by Freon 113 and trichloroethylene above DOHS MCLs. It can not be determined from available sampling data whether contamination of ground water at the Signetics site is attributable to on-site practices or to off-site contaminant migration from the MPI facility 200 feet south of Signetics.

There is no documentation or other evidence to indicate that low levels of contamination found in ground water at this site is attributable to on-site spillage or disposal of hazardous material from the facility. Available evidence indicates that contamination may be due to off-site migration from the high-level MPI ground-water contaminant plume.

FIT recommends a site inspection at this facility because of;

- o the lack of documentation and information concerning past waste management practices of Signetics and AMD,
- o the contamination of the shallow aquifer underlying this facility by trichlorofluoromethane and trichloroethylene.

FIT also recommends that a Preliminary Assessment be completed for the MPI facility 200 feet south of Signetics because of the presence of a trichlorofluoromethane contaminant ground-water plume beneath that facility.

2. FIT Review/Concurrence: *Chris Kichens, 8/11/87*
3. EPA Recommendation for Further Action:
4. Response Termination: No Further Action _____; Active _____;
Pending _____.

Justification:

*Per my discussion w/ ICF today,
it is unlikely that this site will score
high enough for NPC proposal.
No further Corcla action is required
at this time.*

Raul J. Courneye
9.17-87

References

1. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response. Database update. March 19, 1986.
2. U.S. Environmental Protection Agency, Notification of Hazardous Waste Activity, EPA Form 8700-12 (6-80), August 14, 1980.
3. Selditch, Alan D., Manager of Environmental Affairs, Signetics Corp. to U.S. Environmental Protection Agency Region IX. Letter, November 19, 1980.
4. Reese, Joseph C., Corporate Facilities Manager, Signetics Corp. to U.S. Environmental Protection Agency Region IX. Letter, April 17, 1983.
5. Dierker, Fred H., Executive Officer, California Regional Water Quality Control Board to Alan Selditch, Signetics Corp. Letter, May 4, 1983.
6. Reese, Joseph A., Corporate Facilities Manager, Signetics Corp. to California Department of Health Services. Letter, February 14, 1983.
7. Selditch, Alan D., Manager of Environmental Affairs, Signetics Corp. to California Department of Health Services. Letter, December 14, 1982.
8. U.S. Environmental Protection Agency, Notification of Hazardous Waste Activity, EPA Form 8700-12 (6-80), August 14, 1986.
9. Mauricio, Orlando, ICF FIT and Johnson Lam, California Regional Water Quality Control Board. Telephone conversation, July 16, 1987.
10. Sax, N. Irving, Dangerous Properties of Industrial Chemicals, 6th ed. New York: Van Norstand Reinhold Co., 1984.
11. State of California Regional Water Quality Control Board, San Francisco Bay Region. NPDES Permit No. CA0027995, Revision of Waste Discharge Requirements For: Signetics Corp., Peterson Way, Santa Clara, Santa Clara County. Order No. 83-10. May 4, 1983.
12. Mauricio, Orlando, ICF FIT and Teddy Morse, Santa Clara Valley Water District. Telephone conversation, July 21, 1987.
13. U.S. Department of Commerce, Weather Bureau, Cooperative Studies Section, Hydrologic Services Division. Rainfall Frequency Atlas of The United States for Durations from 30 minutes to 24 Hours and Return Periods from 1 to 100 Years. Technical Paper No. 40. Washington D.C. GPO, 1961.
14. Iwamura, Tom, Engineering Geologist for Santa Clara Valley Water District to Jeff Rosenbloom, U.S. Environmental Protection Agency. deposition, July 19, 1984.

15. Rosenbloom, Jeff, U.S. Environmental Protection Agency to Laurel Chun, U.S. Environmental Protection Agency. Memorandum. Rationale for Establishing the Hydraulic Connection Between The Aquifer Zones in the Santa Clara Valley, August 13, 1984.
16. State of California. Regional Water Quality Control Board, Central Valley Region. "Water Quality Objectives" and Hazardous and Designated Levels for Chemical Constituents. Jon B. Marschack. July, 1985.
17. Emcon Associates, Environmental consultants to Signetics Corp. Miscellaneous illustration identified as Figure 2, Soil and Ground Water Investigation, Sunnyvale, CA, Boring Locations. Project No. 377-26. May, 1982.
18. Beer, Tom, E & E FIT and Luane Schnelle, etal, City of Santa Clara. Telephone conversation, April 6, 1987.
19. Beer, Tom, E & E FIT and Larry Disgue, etal, City of Sunnyvale. Telephone conversation, April 6, 1987.
20. U.S. Department of Commerce. Environmental Science Services Administration, Environmental Data Service. Climatic Atlas of the United States. June 1968, Reprinted by the National Oceanic and Atmospheric Administration 1983.
21. Dreessen, Rick, ICF FIT and Sonia Low, California Department of Health Services. Telephone Conversation, July 15, 1987.
22. State of California, Regional Water Quality Control Board, San Francisco Region. Assessment of Contamination From Leaks of Hazardous Materials in the Santa Clara Ground-Water Basin. Report 205J. University of California, Berkeley. July, 1985.

P.A./S.I. Contact Log

Facility Name: Signetics Corp.
Facility ID: CAT 000614040

Name	Affiliation	Phone #	Date	Information
Larry Disgue/ etal	City of Sunnyvale	(408) 730-7500	04/06/87	See Contact Report.
Luane Schnelle	City of Santa Clara	(408) 984-3183	04/06/87	See Contact Report.
Sonia Low	DOHS	(415) 540-3541	07/15/87	Stated the 730 Evelyn Signetics site received a closure permit and that the only other active permit was for the 811 Argues Ave. Signetics site. No information on 3625 Peterson Way. Referred to Ted Park. Suggested contacting Johnson Lam, RWQCB.
Ted Park	DOHS	(415) 540-3541	07/15/87	Only got involved a few months ago. Didn't know anything about this site. Suggested Johnson Lam at RWQCB knows.
Johnson Lam	RWQCB	464-1255	07/16/87	See Contact Report.
Teddy Morse	Santa Clara Valley	(408) 265-2600	07/21/87	See Contact Report.

CONTACT REPORT

AGENCY: Santa Clara Valley Water District (SCVWD)
ADDRESS: 5750 Almaden Expressway
PERSON CONTACTED: Teddy Morse
PHONE: (408) 265-2600 (Ext. 279)
FROM: Orlando J. Mauricio
TO: PA
DATE: July 21, 1987
SUBJECT: Surface Water/Recharge Systems

There are no artificial recharge systems for any of the creeks or rivers near the City of Santa Clara because of the hazardous waste handled by the surrounding industry. There is no artificial recharge in Calabazas Creek. Only natural recharge occurs into the upper aquifer of Santa Clara Valley. The surface water in Santa Clara is not used for drinking purposes.

SCVWD has 16 recharge ponds, most are located in South San Jose. The pond furthest north is in Campbell. The ponds recharge the aquifers which provide drinking water. The Guadalupe River feeds the Alameda and Guadalupe ponds which recharge the aquifers in South San Jose.

Ms. Morse also referred me to Tom Iwamura, Environmental Geologist, for any further questions.

CONTACT REPORT

AGENCY: California Regional Water Quality Control Board
ADDRESS: 1111 Jackson St., Oakland, CA
PERSON CONTACTED: Johnson Lam
PHONE: (415) 464-1287
FROM: Orlando J. Mauricio
TO: File
DATE: July 16, 1987
SUBJECT: 3625 Peterson Way Site/MPI Site

Mr. Lam was not familiar with the activity of the site located at 3625 Peterson Way, but he did say it was not an active site. However, the site operated by Magnetic Peripherals Inc. on Tannery Way (which is across the street from 3625 Peterson) has had ground-water sampling. The results indicates the presence of Freon 113. Levels were "low" (1000-2000 ppb) relative to DOHS Standards (18000 ppb). MPI is now doing a soil gas analysis to find the extent of the Freon gas plume. Mr. Lam said that some monitoring wells are located near 3625 Peterson.

Mr. Lam had no information on the 3600 Peterson Site owned by Signetics.

CONTACT REPORT

AGENCY: City of Sunnyvale
ADDRESS:
PERSON CONTACTED: Larry Disgue, etal
PHONE: (408) 730-7500
FROM: Tom Beer
TO: File
DATE: April 6, 1987
SUBJECT: TRW Microwave and AMD-915, HRS Scoring Factors

City wells supply all of the City of Sunnyvale. Resident population is approximately 112,000 people plus a large influx of daily workers for the aerospace and semiconductor industries. At present, wells supply 26 percent of the water. Forty-eight percent is from the Hetch-Hetchy and the remaining 26 percent from the Santa Clara Valley Irrigation District. Wells in a fully integrated supply system with 30,000 metered service connections. The wells are perforated from 250 to 700 feet. John related two interesting incidents:

1) In 1985 an old, improperly abandoned well collapsed beneath a housing development at the corner of Torrington and Hollenbeck Road, within 3 miles of TRW and AMD.

2) In 1986 an old, 12 inch agricultural well near the corner of Moffett Park Drive and Borregas Avenue started artesian flow. The hole was plumbed to a depth of 240 feet. This hole is 1.4 miles northwest of AMD and TRW.

CONTACT REPORT

AGENCY: City of Santa Clara
ADDRESS:
PERSON CONTACTED: Luanne Schnelle
PHONE: (408) 984-3183
FROM: Tom Beer
TO: File
DATE: April 6, 1987
SUBJECT: TRW Microwave and AMD-915, HRS Scoring Factors

City wells supply drinking water to the City of Santa Clara. Population served is approximately 89,500 from a 27-well integrated system. 20 percent of the drinking water supply is imported surface water from the Hetch-Hetchy Project.

The closest municipal well to the site is the 20-02. It has perforations as high as 257 feet below ground and as deep as 639 feet. Pumping capacity is approximately 1,000 gpm.